NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) **WFO Jackson, Mississippi**
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH: **November** YEAR: **2010**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283		SIGNATURE **Alan E. Gerard, Meteorologist In-Charge** DATE **12/10/2010**

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

X **An X inside this box indicates that no river flooding occurred within this hydrologic service area.**

Synopsis...

A series of frontal systems spaced out over the month of November helped to provide much needed rainfall to the Hydrologic Service Area (HSA). Lower evpotranspiration rates allowed soil moisture deficiency values to improve even across areas that received below normal rainfall for the month.

The month began with a low pressure area over North Texas with an associated stationary front extending east across Southeast Arkansas and into Central Mississippi. The low tracked into Northeast Louisiana on the 2nd and into Southeast Louisiana on the 3rd. Following behind the low, a fast moving cold front pushed across the area from late on the 3rd and into the early hours of the 4th. High pressure brought clearing skies and much cooler temperatures into the HSA. Much needed rainfall ranged from 1.00 to 4.00 inches north of I-20 and 0.50 to 2.50 inches south of I-20.

High pressure with cool temperatures remained in place over the area through the 9th. High pressure shifted eastward from the 10th to the 12th bringing warm, moist air into the region. A cold front slowly moved across the area on the 13th, stalling off of the Mississippi Coast by the morning of the 14th. A low pressure center formed along the front in the Northwest Gulf of Mexico on the 15th. The low shifted to Northeast Mississippi by the morning of the 16th dragging a cold front across the HSA. High pressure built into the area. Rainfall totals for this event ranged from 1.00 to 3.25 inches across all of Mississippi, except the northwest and southeast portions of the HSA, and northern portions of Northeast Louisiana. Southern portions of northeast Louisiana and northwest and southeast portions of Mississippi received from 0.25 to 2.25 inches.

A low pressure area with a trailing cold front rapidly moved across North Mississippi from late on the 17th into the 18th. Rainfall from 0.10 to 0.50 inches fell mostly across central and northern portions of the HSA. Only light showers less than 0.25 inches occurred over the South. High pressure built into the area on the 18th and 19th. High pressure moved eastward on the 20th allowing warm, moist air to return from the Gulf.

A cold front approached the HSA on the 23rd but stalled along the

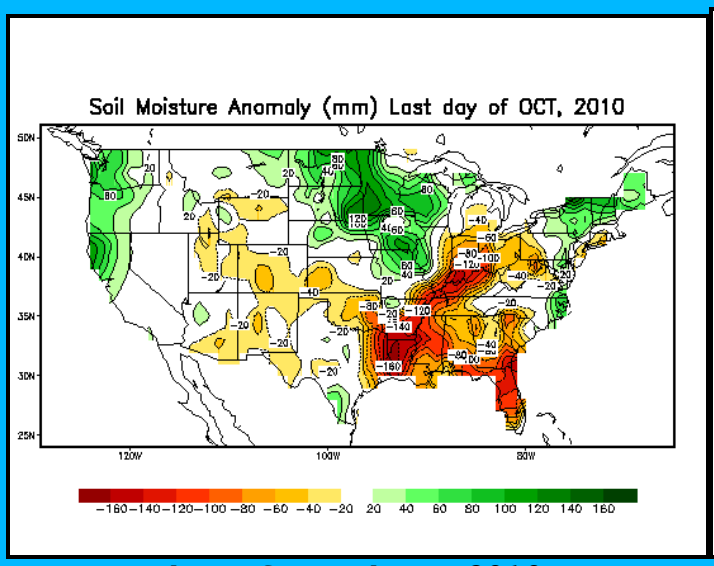
Arkansas/Louisiana border eastward to just north of Columbus, MS, leaving most of the area in warm, moist conditions. Several small tornadoes touched down in Simpson County, MS on the 23rd. Rainfall was scattered across southern and central portions of the HSA. Several lines of thunderstorms in South and South Central Mississippi produced rainfall totals from 0.50 to 1.50 inches while rainfall was a little more widespread over northern portions of the HSA where rainfall amounts from 0.25 to 2.00 inches occurred. Another cold front pushed through the region on the 25th into the morning hours of the 26th. Rainfall was widespread with the front from 0.25 to 0.75 inches with heavier amounts from 0.75 to 1.50 inches from Southwest Mississippi into Central Mississippi. High pressure built into the region from the 26th into the 27th bringing drier and much colder conditions.

High pressure shifted to the east from the 28th until the 29th allowing a warm, moist southerly flow from the Gulf. A cold front entered the HSA during the evening hours of the 29th. A line of severe thunderstorms formed along the front bringing numerous reports of wind damage and at least 13 confirmed tornadoes, including an EF-2 tornado that hit downtown Yazoo City. Rainfall totals ranged from 0.50 to 4.00 inches over all but Southeast Mississippi where rainfall totals were 0.50 inches or less. Some heavier 24 hour rainfall totals ending at 7am on the 30th: 3.90 inches at Jonesville, LA; 3.10 inches at Pat Harrison Waterway's Turkey Creek Water Park, MS; 3.03 inches at Pickens, MS; 3.01 inches at Canton, MS; 2.95 inches at Oakridge, LA; 2.94 inches at Kosciusko, MS; and 2.90 inches at St. Joseph, LA. High pressure pushed into the area behind the front.

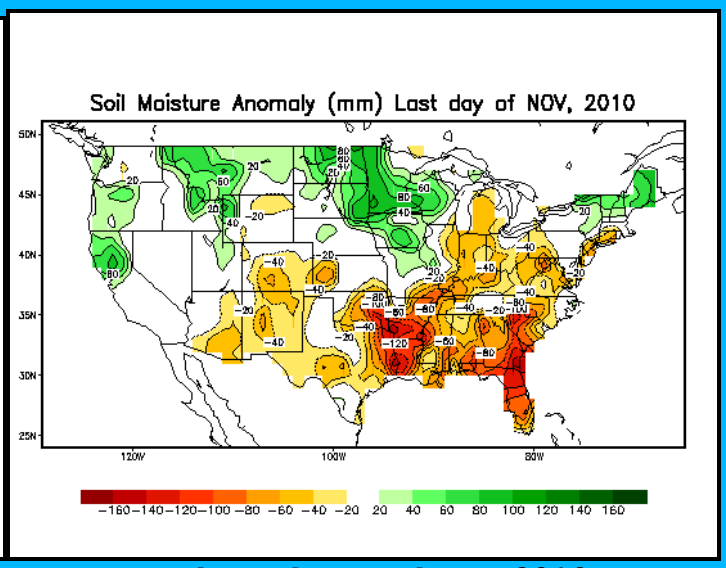
River and Soil Conditions...

The driest locations in the HSA during the month were across southern portions of Northeast Louisiana where rainfall ranged from 25 to 50 percent of normal. Rainfall ranged from 50 to 75 percent of normal from Southeast Arkansas into northwest portions of the HSA in the Yazoo Delta Region and also over extreme Southeast Mississippi. Rainfall from 100 to 175 percent of normal occurred from portions of Central Mississippi into portions of Northeast Mississippi.

Soil moisture deficits decreased by an 1.00 inch across the entire HSA. Soil moisture deficits of 3.00 to 5.00 inches were common across Northeast Louisiana, Southeast Arkansas, and western portions of Mississippi. Soil moisture deficiencies over the remainder of Mississippi ranged from 2.00 to 3.00 inches.



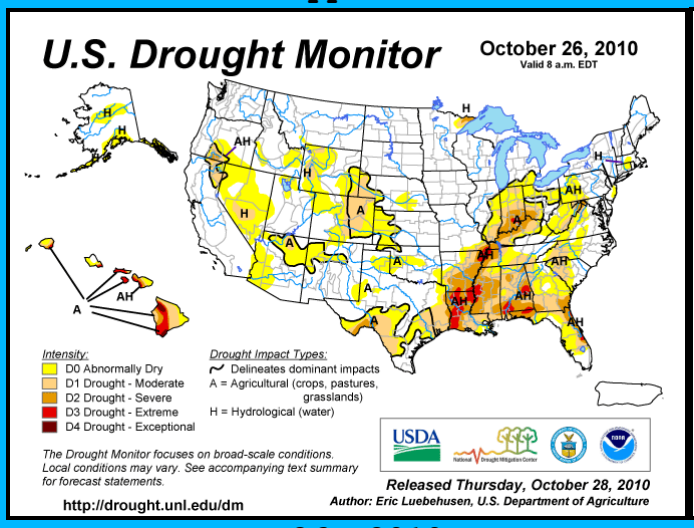
Last day of October, 2010



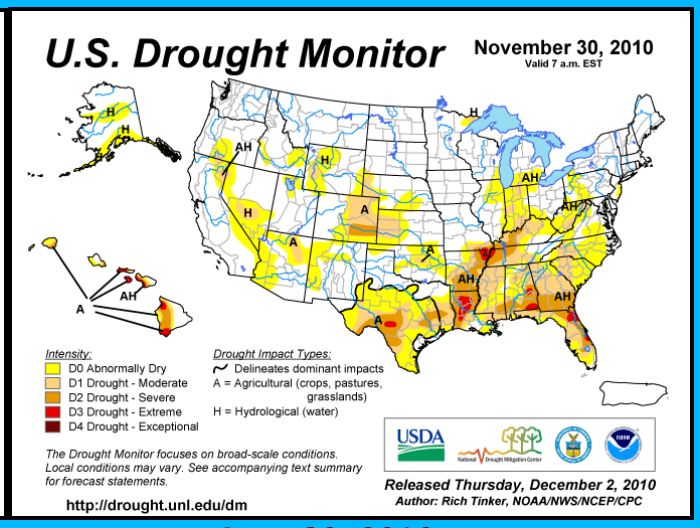
Last day of November, 2010

Soil Moisture anomaly (departure from normal): (25.4mm = 1 inch)

A comparison of the October 26th U.S. Drought Monitor to the November 23rd U.S. Drought Monitor showed drought conditions improving somewhat across the HSA. Extreme Drought (D3) contracted to western edges of Northeast Louisiana Parishes along the east side of the Ouachita River. Severe Drought (D2) contracted Southeast Arkansas and the remainder of Northeast Louisiana and remained over small portion of Southeast Mississippi. Moderate Drought (D1) covered the remainder of Mississippi except for Abnormally Dry (D0) conditions from East Central Mississippi into portions of South Mississippi.

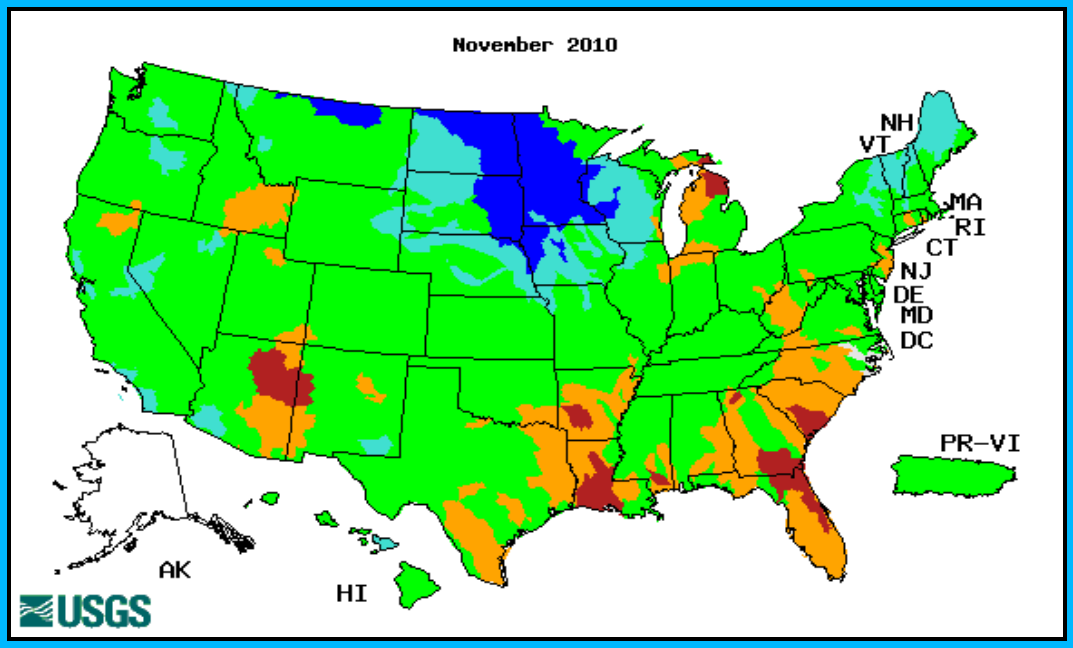


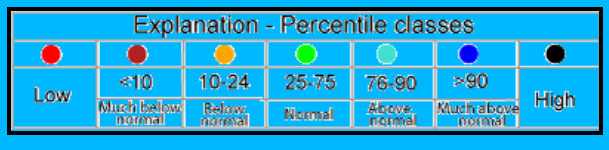
OCTOBER 26, 2010



November 30,2010

The United States Geological Survey's (USGS) November 2010 river streamflow records were compared with all historical November streamflow records. Stream flows were normal throughout the HSA except for several sub-basins in the Pascagoula River System. The Bouie Creek sub-basin and several stream gages in the Chickasawhay sub-basin were below normal while the remaining streamflow gages in the Pascagoula River System were normal.





No river flooding was reported during the month. River stages remained mostly steady with some minor rises during the month.

The Mississippi River experienced minor fluctuations in river stages for the first three weeks of the month; however, by the last week of the month, the river began a slow rise.

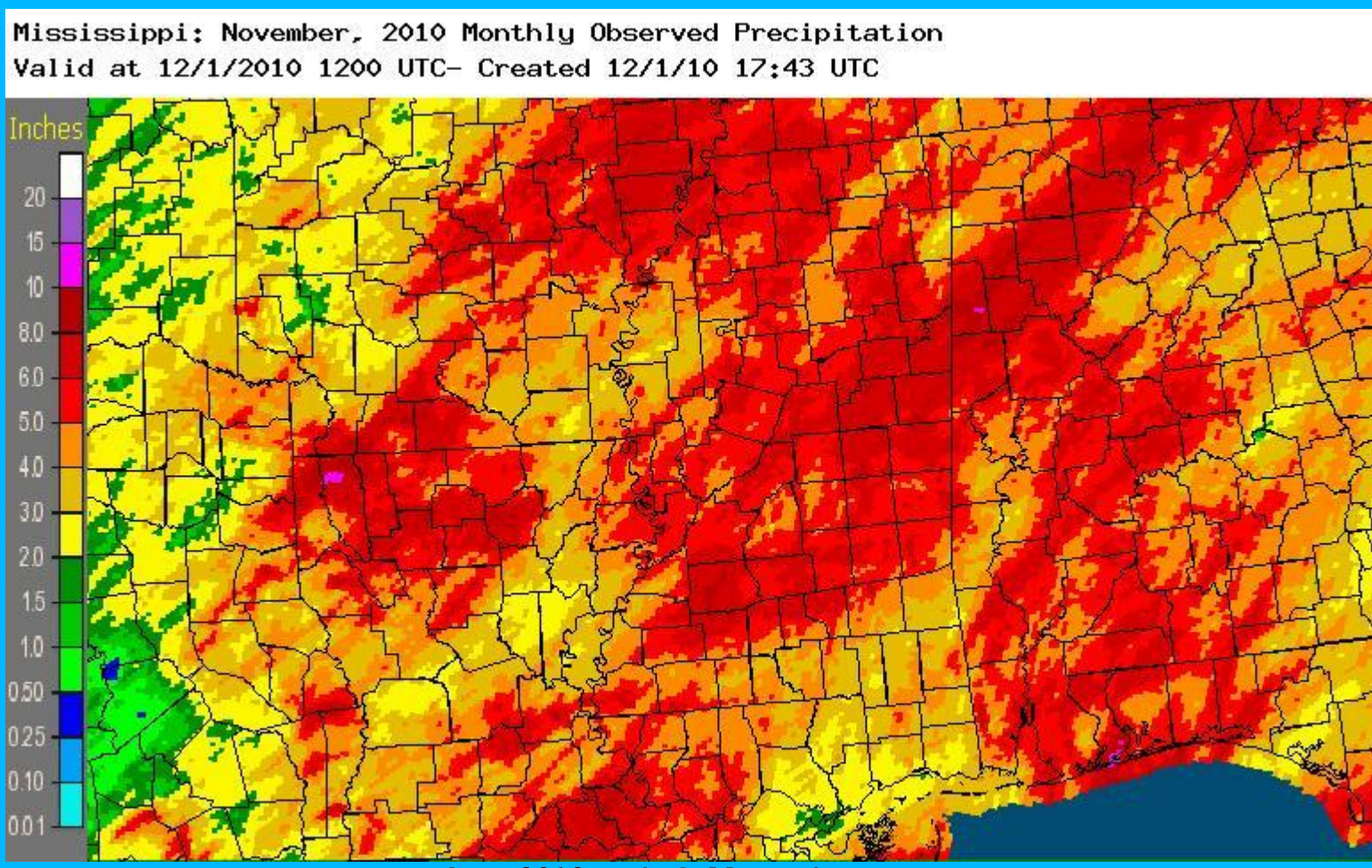
Based on current soil moisture conditions, current streamflow conditions, and an expected below normal rainfall pattern across much of the HSA over the next 60 to 90 days:

***Pearl River System*:**	**Below Normal.**
***Yazoo River System*:**	**Below Normal.**
***Big Black River System*:**	**Below Normal.**
***Homochitto River System*:**	**Below Normal.**
***Pascagoula River System*:**	**Below Normal.**
***Northeast LA and Southeast AR*:**	**Below Normal.**
***Tombigbee River System*:**	**Below Normal.**
Mississippi River:	**Normal.**

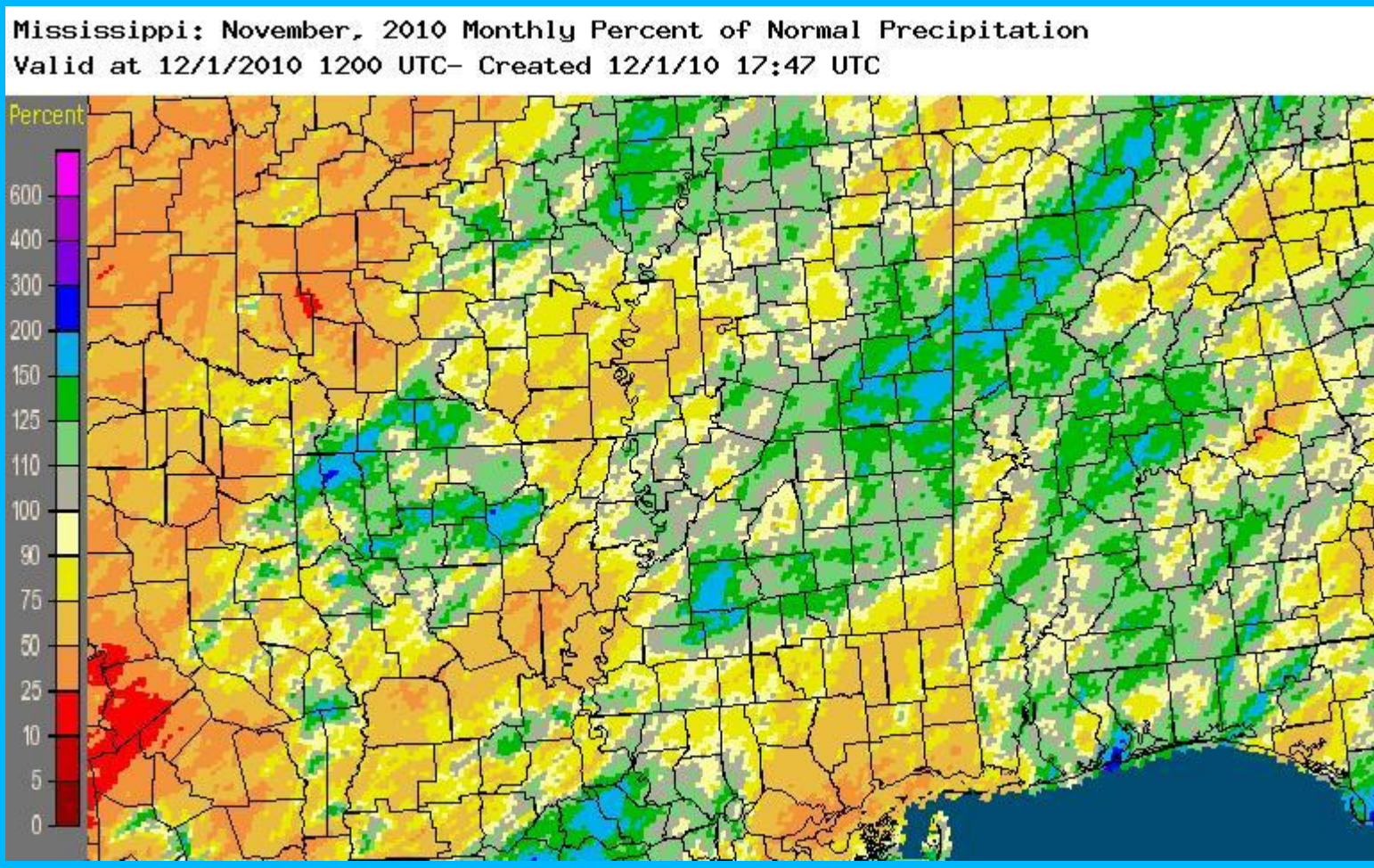
Rainfall for the month of October

The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on October 31st until 7 am on November 30th were: 9.26 inches at Macon, MS; 8.50 inches at McCool, MS; 5.20 inches at Natchez, MS; 8.43 inches at Pat Harrison Waterway's Dry Creek Water Park, MS; 8.36 inches at Pat Harrison Waterway's Turkey Creek Water Park, MS; 7.85 inches at Philadelphia, MS; 7.83 inches at Bay Springs, MS; 7.79 inches at Columbus, MS; 7.72 inches at St. Joseph, LA; and 7.56 inches at Canton, MS.

The lowest rainfall totals in the HSA were: 3.70 inches at Hattiesburg, MS; 3.78 inches at Greenville, MS; 4.07 inches at Red River Lock and Dam 1, LA; 4.42 inches at Dermott, AR; 4.43 inches at Stoneville, MS; 4.56 inches at Laurel, MS; and 4.62 inches at Larto Lake, LA.



November 2010 Rainfall Estimates



November 2010 Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

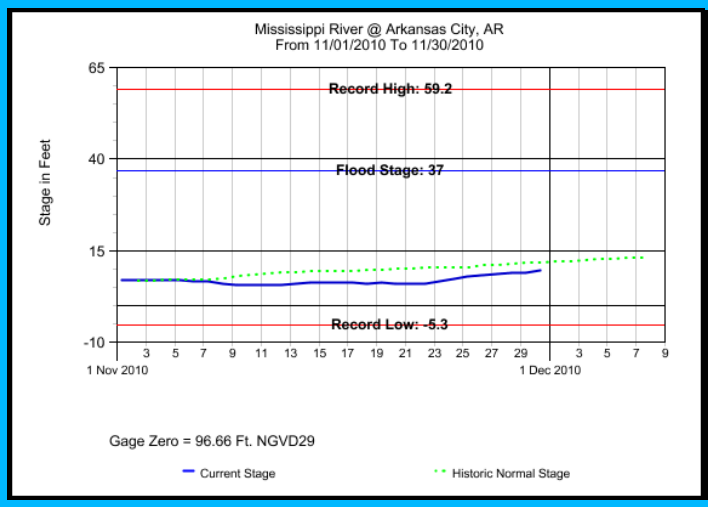
November rainfall for Selected Cities...

City (Airport)	November Rainfall	Departure from normal	2010 Rainfall	2010 Departure from Normal
Jackson, MS	6.02	+0.98	43.34	-7.27
Meridian, MS	5.13	+0.18	40.45	-12.89
Greenwood, MS	4.68	-0.17	33.17	-15.87
Greenville, MS	4.52	-1.08	28.12	-20.83
Hattiesburg, MS	M	M	M	M
Vicksburg, MS	M	M	M	M

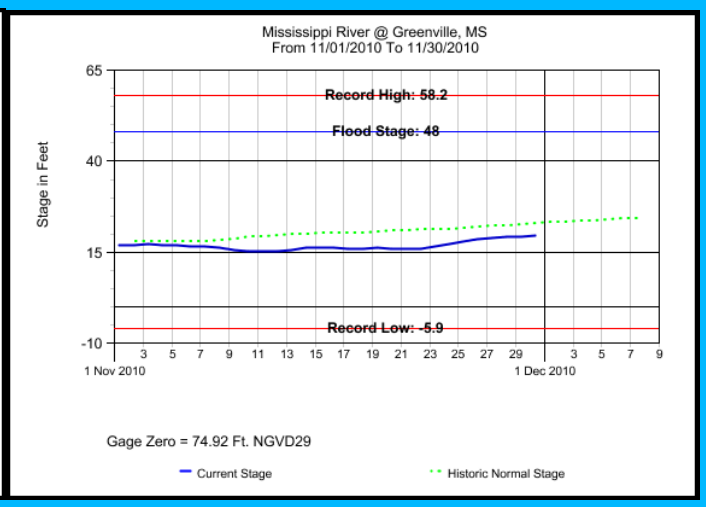
Mississippi River...

Mississippi River Plots for November, 2010

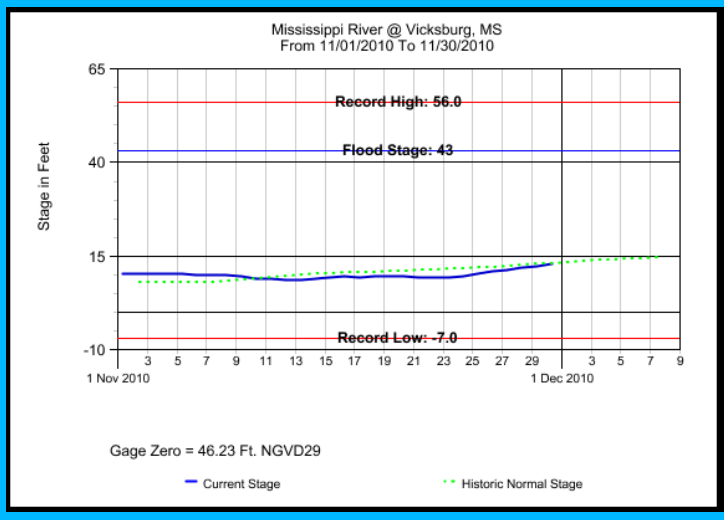
Plots Courtesy of the United States Army Corps of Engineers



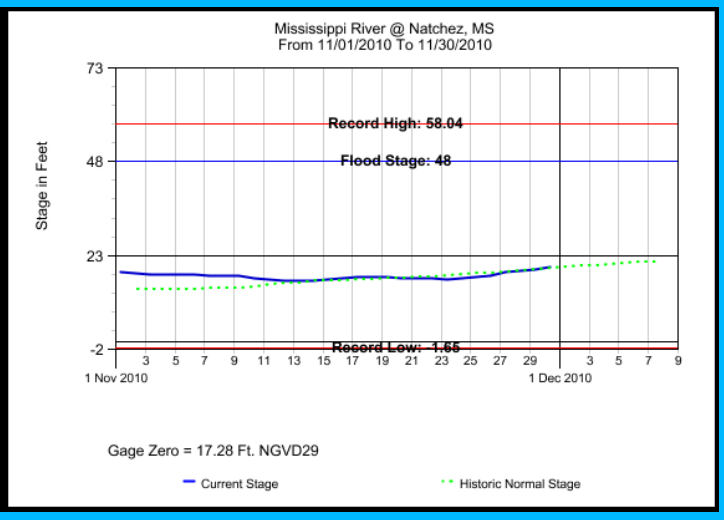
ARKANSAS CITY, MS



GREENVILLE, MS



VICKSBURG, MS



NATCHEZ, MS

Preliminary high and low stages for the month:

Location	FS	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	37	10.69	11/30/10	5.42	11/10/10
Greenville, MS	48	20.77	11/30/10	15.31	11/11/10
Vicksburg, MS	43	12.93	11/30/10	8.61	11/12/10
Natchez, MS	48	20.18	11/30/10	16.14	11/13/10

Total Flood Warning products issued: 0
Total Flood Statement products issued: 0
Total Flood Advisories MS River : 0
Daily Rainfall Products (RRA'S) issued: 30
Daily River Forecast Products (RVS'S) issued: 30
Daily River Stage products (RVA'S) issued: 30

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Service Hydrologist

&

Latrice Maxie

Assistant Hydrologist/Observing Program Leader (OPL)

Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District